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Quality Engineering Test Report

SERIES: DR-45 45W AC-DC SINGLE OUTPUT SWITCHING POWER SUPPLY

SAMPLE: A. DR-4505 5V / 5A
B. DR-4512 12V / 3.5A
C. DR-4515 15V / 2.8A
D. DR-4524 24V / 2A

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:85~264VAC O/P:FULL LOAD	B : 54.8VAC~264VAC	P
2	LINE REGULATION	I/P:85~264VAC SPEC: A: ±1% B: ±1% O/P:FULL LOAD C: ±1% D: ±1%	A: +0% +0% B: +0.0% +0.149% C: +0.0% +0.12% D: +0.074% +0.074%	P
3	LOAD REGULATION	I/P:230VAC SPEC: A: ±1% B: ±1% O/P:MIN. TO FULL LOAD C: ±1% D: ±1%	A: -0.118% +0.237% B: +0.099% -0.0497% C: +0.12% +0.08% D: -0.388% +0.024%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC SPEC: A: ±2% B: ±1% O/P:MIN TO FULL LOAD C: ±1% D: ±1%	A: +0.118% +0.49% B: -0.0497% +0.0497% C: +0.0% -0.2% D: +0.05% +1.03%	P
5	RIPPLE&NOISE	I/P:230VAC SPEC: A: 100mV B: 200mV O/P:FULL LOAD C: 240mV D: 480mV	A:15mV B:.15mV C:27mV D:24mV	P
6	AC INPUT CURRENT	I/P:230VAC SPEC: 0.75A O/P:FULL LOAD	B :0.507A	P
7	MAX. INRUSH CURREN	I/P:230VAC SPEC: 60A O/P: FULL LOAD	B:: 36.062A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC SPEC: A: -5%~+10% O/P:MIN. LOAD B: ±10% C: ±10% D: ±10%	A:4.49V~6.3V B:10.256V~13.939V C:12.26V~17.28V D:20.3V~28.4V	P
9	SET UP TIME	I/P:230VAC SPEC:800mS O/P:FULL LOAD	B: 139.68mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:50mS O/P:FULL LOAD	B: 98.839mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A:72% B:77% O/P:FULL LOAD C:77% D:80%	A:73.7% B:78.355% C:77.8% D:81%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC: 105%~150% O/P:TESTING	A:117% B:116.4% C:122% D:120%	P
13	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<1mA N-FG--<1mA	B: L-FG:0.21mA N-FG:0.21mA	P
14	INSULATION RESISTANCE	SPEC: I/P-O/P: 500VDC/100M Ohms MIN. I/P-FG : 500VDC/100M Ohms MIN. O/P-FG: 500VDC/100M Ohms MIN.	B: O/P-FG >100M Ohms I/P-O/P >100M Ohms I/P-FG >100M Ohms	P
15	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3KVAC/ 1 min. (10mA CUT-OFF) I/P - FG: 1.5KVAC/ 1 min. (10mA CUT-OFF) O/P -FG: 0.5KVAC/ 1 min. (10mA CUT-OFF)	B: I/P-O/P :3.33mA I/P-FG :2.172mA O/P-FG :3.56mA	P
16	BURN-IN TEST	I/P: 230VAC O/P: FULL LOAD TA:26.8°C BURN-IN DURATION : 2 hrs	A : NON BREAK	P

NEXT

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td rowspan="3">17</td><td rowspan="3">ENVIRONMENT TEST</td><td>1.LOW TEMPERATURE TEST
I/P:230 VAC O/P:100% LOAD
AMBIENT TEMPERATURE:-9.9°C</td><td>D :
AFTER 14 hrs POWER ON OK</td><td rowspan="3">P</td></tr>
<tr><td>2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST
I/P:230VAC O/P:FULL LOAD
AMBIENT TEMPERATURE:50.1°C</td><td>D :
AFTER 3 hrs NON BREAK</td></tr>
<tr><td>3.HIGH HUMIDITY HIGH VOLTAGE ON/OFF TEST
I/P:264VAC O/P:FULL LOAD
AMBIENT TEMPERATURE ： 25°C
AMBIENT HUMIDITY ： 95%</td><td>D :
AFTER18 hrs POWER ON/OFFNON BREAK</td></tr>
<tr><td>18</td><td>TEMPERATURE RISE TEST T rise OF PARTS</td><td colspan="2">D: I/P :230VAC AFTER 2 hr BURN-IN
O/P :FULL LOAD TA:26.8°C
<table>
<tr><th></th><th>POSITION</th><th>P/N</th><th>TEMP</th><th>T rise</th></tr>
<tr><td></td><td>BD1</td><td>BRIDGE DIODE</td><td>56.6°C</td><td>29.8°C</td></tr>
<tr><td></td><td>U1</td><td>MAIN TRANSISTOR</td><td>64.7°C</td><td>37.9°C</td></tr>
<tr><td></td><td>T1</td><td>MAIN TRANSFORMER WIRE</td><td>75.7°C</td><td>48.9°C</td></tr>
<tr><td></td><td>D20</td><td>O/P DIODE</td><td>78.9°C</td><td>52.1°C</td></tr>
<tr><td></td><td>C25</td><td>O/P FILTER CAPACITOR</td><td>74.8°C</td><td>48.0°C</td></tr>
<tr><td></td><td>C5</td><td>I/P FILTER CAPACITOR</td><td>54.8°C</td><td>28.0°C</td></tr>
<tr><td></td><td>LF1</td><td>LINE FILTER TRANSFORMER</td><td>61.0°C</td><td>34.2°C</td></tr>
</table></td><td>P</td></tr>
<tr><td>19</td><td>LIFE CYCLE</td><td colspan="2">D: SUPPOSE C25 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:25°C Tc25:74.8°C Life: 32615.3 hrs
I/P:230VAC O/P:FULL LOAD Ta:45°C Tc45:92.2°C Life:12279.5 hrs</td><td>P</td></tr>
<tr><td>20</td><td>CRITICAL COMPONENT RECORD
(FOR QC INSPECTION REFERENCE ONLY)</td><td colspan="3">D: FUSE : 3AL/250V
BRIDGE DIODE : D3SB60 4A/800V
LINE FILTER : TF-484
TRANSFOMER : TF659
POWER SWITCHER : TOP-227
OUTPUT DIODE : BYQ-28X-200
OUTPUT CAPACITOR : 330uF/35V(v) 105°C ELNA LXJ
INPUT CAPACITOR : RUBYCON 100uF/400V 105°C
P.C.B : DR-45-R2 CEM-3 20 OZ SS</td></tr>
</table>

DATE	SAMPLE	TEST RESULT	TEST	APPROVAL
20000704	RD SAMPLE	PASS	VINCENT	MAX.LIN
20000822	PRODUCT SAMPLE A007C25 DR4505 DR4512 DR4515 DR4524	PASS	VINCENT	MAX.LIN

PREVIOUS NEXT

20001019	**PRODUCT SAMPLE A0010A12 DR4505 DR4512 DR4515 DR4524**	PASS	**VINCENT**	**MAX.LIN**
20001205	**PRODUCT SAMPLE A011D19 DR4524**	PASS	**VINCENT**	**MAX.LIN**
20010110	**PRODUCT SAMPLE A101A09 DR4505**	PASS	**VINCENT**	**MAX.LIN**
20010219	**PRODUCT SAMPLE A102b17 DR4512**	PASS	**SAM**	**MAX.LIN**

PREVIOUS